



amato a

SEQUENCE LISTING

<110> Wood, Clive
Chaudhary, Divya
Long, Andrew
Genetics Institute, Inc.

<120> TRADE MOLECULES, AND USES RELATED THERETO

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<170> PatentIn Ver. 2.1

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Asp Cys Arg Gln Gln Glu Phe Arg Asp Arg Ser Gly Asn Cys Val Pro
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tgc aac cag tgt ggg cca ggc atg gag ttg tct aag gaa tgt ggc ttc 192
Cys Asn Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe
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Lys Glu Asp Trp Gly Phe Gln Lys Cys Lys Pro Cys Leu Asp Cys Ala
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Cys Asn Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe
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360

365

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 405 410 415

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 Leu Val Asn Arg Phe Gln Arg Ala Asn Cys Ser His Thr Ser Asp Ala
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							405				410			415			
tgaaggccat	tttcctgacg	tggaggtgtg	ggtctggaca	agcctgtat	gaggcctaca											1308	
gactgagcag	tcttggtgtc	tggaagcaaa	aataaatctg	aacccaaactg	acaacatttc											1368	
catcctttca	gccactagct	tctgagccag	accagctgta	agctgaaacc	ccagcaagaa											1428	

gcaaggagag actgactgt a ggcggcctt g gacatgtc ttctcccta agcgagaacc 1488
ttagctggg ccaattt gaa ggaccatgg gtggaatgtg ctgcctgtga gcttgtggc 1548
acagcaggac ccagcctggc tccttcttat gtccacggtg aatgtggttt cacaagaccc 1608
agagtataaa ctttcataga cattctcttt tagaaataat ccattaccct gtcttcaaaa 1668
accaaaaaaaaaaaaaaaaagtg gtgttaaggt tttgaacatc acctagccaa gttagtaaaa 1728
tctttatgg tatttcatct caattttttt aactattcat tttccttgta tgaattctt 1788
tgtgtttat gtgtaaatat attcatttatt ttgacactat caatattctt tgtggttt 1848
taatttttac ttttattaat gactcaagct gtaaaaataa actaatttca acgtcgacgc 1908
qqccqc 1914

<210> 6
<211> 416
<212> PRT
<213> Mus musculus

<400> 6
Met Ala Leu Lys Val Leu Pro Leu His Arg Thr Val Leu Phe Ala Ala
1 5 10 15

Ile Leu Phe Leu Leu His Leu Ala Cys Lys Val Ser Cys Glu Thr Gly
20 25 30

Asp Cys Arg Gln Gln Glu Phe Lys Asp Arg Ser Gly Asn Cys Val Leu
35 40 45

Cys Lys Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe
50 55 60

Lys Glu Asp Trp Gly Phe Gln Lys Cys Lys Pro Cys Ala Asp Cys Ala
85 90 95

Leu Val Asn Arg Phe Gln Arg Ala Asn Cys Ser His Thr Ser Asp Ala
100 105 110

Val Cys Gly Asp Cys Leu Pro Gly Phe Tyr Arg Lys Thr Lys Leu Val
115 120 125

Gly Phe Gln Asp Met Glu Cys Val Pro Cys Gly Asp Pro Pro Pro Pro
130 135 140

Tyr Glu Pro His Cys Thr Ser Lys Val Asn Leu Val Lys Ile Ser Ser
145 150 155 160

Thr Val Ser Ser Pro Arg Asp Thr Ala Leu Ala Ala Val Ile Cys Ser

165	170	175
Ala Leu Ala Thr Val Leu Leu Ala Leu Leu Ile Leu Cys Val Ile Tyr		
180	185	190
Cys Lys Arg Gln Phe Met Glu Lys Lys Pro Ser Trp Ser Leu Arg Ser		
195	200	205
Gln Asp Ile Gln Tyr Asn Gly Ser Glu Leu Ser Cys Phe Asp Gln Pro		
210	215	220
Arg Leu Arg His Cys Ala His Arg Ala Cys Cys Gln Tyr His Arg Asp		
225	230	235
Ser Ala Pro Met Tyr Gly Pro Val His Leu Ile Pro Ser Leu Cys Cys		
245	250	255
Glu Glu Ala Arg Ser Ser Ala Arg Ala Val Leu Gly Cys Gly Leu Arg		
260	265	270
Ser Pro Thr Thr Leu Gln Glu Arg Asn Pro Ala Ser Val Gly Asp Thr		
275	280	285
Met Pro Ala Phe Phe Gly Ser Val Ser Arg Ser Ile Cys Ala Glu Phe		
290	295	300
Ser Asp Ala Trp Pro Leu Met Gln Asn Pro Leu Gly Gly Asp Ser Ser		
305	310	315
Leu Cys Asp Ser Tyr Pro Glu Leu Thr Gly Glu Asp Thr Asn Ser Leu		
325	330	335
Asn Pro Glu Asn Glu Ser Ala Ala Ser Leu Asp Ser Ser Gly Gly Gln		
340	345	350
Asp Leu Ala Gly Thr Ala Ala Leu Glu Ser Ser Gly Asn Val Ser Glu		
355	360	365
Ser Thr Asp Ser Pro Arg His Gly Asp Thr Gly Thr Val Trp Glu Gln		
370	375	380
Thr Leu Ala Gln Asp Ala Gln Arg Thr Pro Ser Gln Gly Trp Glu		
385	390	395
Asp Arg Glu Asn Leu Asn Leu Ala Met Pro Thr Ala Phe Gln Asp Ala		
405	410	415

<210> 7
<211> 27
<212> DNA
<213> Mus musculus

<400> 7
aggccatctt cctgacgtgg aggtgtg

27

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<210> 8
<211> 35
<212> DNA
<213> Mus musculus

<400> 8
cggaattcgt ttcagcttag cacattccaa ggccg 35

<210> 9
<211> 9
<212> PRT
<213> Homo sapiens

<400> 9
Ser Thr Ala Ser Ser Pro Arg Asp Thr
1 5

<210> 10
<211> 7
<212> PRT
<213> Homo sapiens

<400> 10
Asp Lys Thr His Thr Cys Pro
1 5

<210> 11
<211> 417
<212> PRT
<213> Homo sapiens

<400> 11
Met Ala Leu Lys Val Leu Leu Glu Gln Glu Lys Thr Phe Phe Thr Leu
1 5 10 15

Leu Val Leu Leu Gly Tyr Leu Ser Cys Lys Val Thr Cys Glu Ser Gly
20 25 30

Asp Cys Arg Gln Gln Glu Phe Arg Asp Arg Ser Gly Asn Cys Val Pro
35 40 45

Cys Asn Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe
50 55 60

Gly Tyr Gly Glu Asp Ala Gln Cys Val Thr Cys Arg Leu His Arg Phe
65 70 75 80

Lys Glu Asp Trp Gly Phe Gln Lys Cys Lys Pro Cys Leu Asp Cys Ala
85 90 95

Val Val Asn Arg Phe Gln Lys Ala Asn Cys Ser Ala Thr Ser Asp Ala
100 105 110

Ile Cys Gly Asp Cys Leu Pro Gly Phe Tyr Arg Lys Thr Lys Leu Val
115 120 125

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Gly Phe Gln Asp Met Glu Cys Val Pro Cys Gly Asp Pro Pro Pro Pro
 130 135 140

Tyr Glu Pro His Cys Ala Ser Lys Val Asn Leu Val Lys Ile Ala Ser
 145 150 155 160

Thr Ala Ser Ser Pro Arg Asp Thr Ala Leu Ala Val Ile Cys Ser
 165 170 175

Ala Leu Ala Thr Val Leu Leu Ala Leu Ile Leu Cys Val Ile Tyr
 180 185 190

Cys Lys Arg Gln Phe Met Glu Lys Lys Pro Ser Trp Ser Leu Arg Ser
 195 200 205

Gln Asp Ile Gln Tyr Asn Gly Ser Glu Leu Ser Cys Phe Asp Arg Pro
 210 215 220

Gln Leu His Glu Tyr Ala His Arg Ala Cys Cys Gln Cys Arg Arg Asp
 225 230 235 240

Ser Val Gln Thr Cys Gly Pro Val Arg Leu Leu Pro Ser Met Cys Cys
 245 250 255

Glu Glu Ala Cys Ser Pro Asn Pro Ala Thr Leu Gly Cys Gly Val His
 260 265 270

Ser Ala Ala Ser Leu Gln Ala Arg Asn Ala Gly Pro Ala Gly Glu Met
 275 280 285

Val Pro Thr Phe Phe Gly Ser Leu Thr Gln Ser Ile Cys Gly Glu Phe
 290 295 300

Ser Asp Ala Trp Pro Leu Met Gln Asn Pro Met Gly Gly Asp Asn Ile
 305 310 315 320

Ser Phe Cys Asp Ser Tyr Pro Glu Leu Thr Gly Glu Asp Ile His Ser
 325 330 335

Leu Asn Pro Glu Leu Glu Ser Ser Thr Ser Leu Asp Ser Asn Ser Ser
 340 345 350

Gln Asp Leu Val Gly Gly Ala Val Pro Val Gln Ser His Ser Glu Asn
 355 360 365

Phe Thr Ala Ala Thr Asp Leu Ser Arg Tyr Asn Asn Thr Leu Val Glu
 370 375 380

Ser Ala Ser Thr Gln Asp Ala Leu Thr Met Arg Ser Gln Leu Asp Gln
 385 390 395 400

Glu Ser Gly Ala Val Ile His Pro Ala Thr Gln Thr Ser Leu Gln Glu
 405 410 415

Ala

<210> 12
<211> 423
<212> PRT
<213> Homo sapiens

<400> 12
Met Ala Leu Lys Val Leu Leu Glu Gln Glu Lys Thr Phe Phe Thr Leu
1 5 10 15

Leu Val Leu Leu Gly Tyr Leu Ser Cys Lys Val Thr Cys Glu Ser Gly
20 25 30

Asp Cys Arg Gln Gln Glu Phe Arg Asp Arg Ser Gly Asn Cys Val Pro
35 40 45

Cys Asn Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe
50 55 60

Gly Tyr Gly Glu Asp Ala Gln Cys Val Ala Cys Arg Leu His Arg Phe
65 70 75 80

Lys Glu Asp Trp Gly Phe Gln Lys Cys Lys Pro Cys Leu Asp Cys Ala
85 90 95

Val Val Asn Arg Phe Gln Lys Ala Asn Cys Ser Ala Thr Ser Asp Ala
100 105 110

Ile Cys Gly Asp Cys Leu Pro Gly Phe Tyr Arg Lys Thr Lys Leu Val
115 120 125

Gly Phe Gln Asp Met Glu Cys Val Pro Cys Gly Asp Pro Pro Pro Pro
130 135 140

Tyr Glu Pro His Cys Ala Ser Lys Val Asn Leu Val Lys Ile Ala Ser
145 150 155 160

Thr Ala Ser Ser Pro Arg Asp Thr Ala Leu Ala Val Ile Cys Ser
165 170 175

Ala Leu Ala Thr Val Leu Leu Ala Leu Leu Ile Leu Cys Val Ile Tyr
180 185 190

Cys Lys Arg Gln Phe Met Glu Lys Lys Pro Ser Trp Ser Leu Arg Ser
195 200 205

Gln Asp Ile Gln Tyr Asn Glu Ser Glu Leu Ser Cys Phe Asp Arg Pro
210 215 220

Gln Leu His Glu Tyr Ala His Arg Ala Cys Cys Gln Cys Arg Arg Asp
225 230 235 240

Ser Val Gln Thr Cys Gly Pro Val Arg Leu Leu Pro Ser Met Cys Cys
245 250 255

Glu Glu Ala Cys Ser Pro Asn Pro Ala Thr Leu Gly Cys Gly Val His

260	265	270
Ser Ala Ala Ser Leu Gln Ala Arg Asn Ala Gly Pro Ala Gly Glu Met		
275	280	285
Val Pro Thr Phe Phe Gly Ser Leu Thr Gln Ser Ile Cys Gly Glu Phe		
290	295	300
Ser Asp Ala Trp Pro Leu Met Gln Asn Pro Met Gly Gly Asp Asn Ile		
305	310	315
Ser Phe Cys Asp Ser Tyr Pro Glu Leu Thr Gly Glu Asp Ile His Ser		
325	330	335
Leu Asn Pro Glu Leu Glu Ser Ser Thr Ser Leu Asp Ser Asn Ser Ser		
340	345	350
Gln Asp Leu Val Gly Gly Ala Val Pro Val Gln Ser His Ser Glu Asn		
355	360	365
Phe Thr Ala Ala Thr Asp Leu Ser Arg Tyr Asn Asn Thr Leu Val Glu		
370	375	380
Ser Ala Ser Thr Gln Asp Ala Leu Thr Met Arg Ser Gln Leu Asp Gln		
385	390	395
Glu Ser Gly Ala Val Ile His Pro Ala Thr Gln Thr Ser Leu Gln Glu		
405	410	415
Arg Gln Arg Leu Gly Ser Leu		
420		

<210> 13
 <211> 420
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Consensus sequence

<400> 13
 Met Ala Leu Lys Val Leu Leu Glu Gln Glu Lys Thr Phe Phe Thr Leu
 1 5 10 15

Leu Val Leu Leu Gly Tyr Leu Ser Cys Lys Val Thr Cys Glu Ser Gly
 20 25 30

Asp Cys Arg Gln Gln Glu Phe Arg Asp Arg Ser Gly Asn Cys Val Pro
 35 40 45

Cys Asn Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe
 50 55 60

Gly Tyr Gly Glu Asp Ala Gln Cys Val Thr Cys Arg Leu His Arg Phe
 65 70 75 80

Lys Glu Asp Trp Gly Phe Gln Lys Cys Lys Pro Cys Leu Asp Cys Ala
85 90 95

Val Val Asn Arg Phe Gln Lys Ala Asn Cys Ser Ala Thr Ser Asp Ala
100 105 110

Ile Cys Gly Asp Cys Leu Pro Gly Phe Tyr Arg Lys Thr Lys Leu Val
115 120 125

Gly Phe Gln Asp Met Glu Cys Val Pro Cys Gly Asp Pro Pro Pro Pro
130 135 140

Tyr Glu Pro His Cys Ala Ser Lys Val Asn Leu Val Lys Ile Ala Ser
145 150 155 160

Thr Ala Ser Ser Pro Arg Asp Thr Ala Leu Ala Ala Val Ile Cys Ser
165 170 175

Ala Leu Ala Thr Val Leu Leu Ala Leu Leu Ile Leu Cys Val Ile Tyr
180 185 190

Cys Lys Arg Gln Phe Met Glu Lys Lys Pro Ser Trp Ser Leu Arg Ser
195 200 205

Gln Asp Ile Gln Tyr Asn Gly Ser Glu Leu Ser Cys Phe Asp Arg Pro
210 215 220

Gln Leu His Glu Tyr Ala His Arg Ala Cys Cys Gln Cys Arg Arg Asp
225 230 235 240

Ser Val Gln Thr Cys Gly Pro Val Arg Leu Leu Pro Ser Met Cys Cys
245 250 255

Glu Glu Ala Cys Ser Pro Asn Pro Ala Thr Leu Gly Cys Gly Val His
260 265 270

Ser Ala Ala Ser Leu Gln Ala Arg Asn Ala Gly Pro Ala Gly Glu Met
275 280 285

Val Pro Thr Phe Phe Gly Ser Leu Thr Gln Ser Ile Cys Gly Glu Phe
290 295 300

Ser Asp Ala Trp Pro Leu Met Gln Asn Pro Met Gly Gly Asp Asn Ile
305 310 315 320

Ser Phe Cys Asp Ser Tyr Pro Glu Leu Thr Gly Glu Asp Ile His Ser
325 330 335

Leu Asn Pro Glu Leu Glu Ser Ser Thr Ser Leu Asp Ser Asn Ser Ser
340 345 350

Gln Asp Leu Val Gly Gly Ala Val Pro Val Gln Ser His Ser Glu Asn
355 360 365

Phe Thr Ala Ala Thr Asp Leu Ser Arg Tyr Asn Asn Thr Leu Val Glu
370 375 380

Ser Ala Ser Thr Gln Asp Ala Leu Thr Met Arg Ser Gln Leu Asp Gln
385 390 395 400

Glu Ser Gly Ala Ile His Pro Ala Thr Gln Thr Ser Leu Gln Gln Arg
405 410 415

Leu Gly Ser Leu
420

<210> 14
<211> 17
<212> PRT
<213> Homo sapiens

<400> 14
Glu Ser Gly Ala Ile Ile His Pro Ala Thr Gln Thr Ser Leu Gln Glu
1 5 10 15

Ala

<210> 15
<211> 23
<212> PRT
<213> Homo sapiens

<400> 15
Glu Ser Gly Ala Ile Ile His Pro Ala Thr Gln Thr Ser Leu Gln Val
1 5 10 15

Arg Gln Arg Leu Gly Ser Leu
20

<210> 16
<211> 34
<212> PRT
<213> Homo sapiens

<400> 16
Cys Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys Lys Ala Cys
1 5 10 15

Asn Leu Gly Glu Gly Val Ala Gln Pro Cys Gly Ala Asn Gln Thr Val
20 25 30

Cys Glu

<210> 17
<211> 34
<212> PRT
<213> Homo sapiens

<400> 17
Cys Gly Asp Thr Tyr Pro Ser Asn Asp Arg Cys Cys His Glu Cys Arg
1 5 10 15

Pro Gly Asn Gly Met Val Ser Arg Cys Ser Arg Ser Gln Asn Thr Val
20 25 30

Cys Arg

<210> 18
<211> 35
<212> PRT
<213> Homo sapiens

<400> 18
Cys Arg Glu Lys Gln Tyr Leu Leu Asn Ser Gln Cys Cys Ser Leu Cys
1 5 10 15

Gln Pro Gly Gln Lys Leu Val Ser Asp Cys Thr Glu Phe Thr Glu Thr
20 25 30

Glu Cys Leu
35

<210> 19
<211> 40
<212> PRT
<213> Homo sapiens

<400> 19
Cys Arg Gln Gln Glu Phe Arg Asp Arg Ser Gly Asn Cys Val Pro Cys
1 5 10 15

Asn Gln Cys Gly Pro Gly Met Glu Leu Ser Lys Glu Cys Gly Phe Gly
20 25 30

Tyr Gly Glu Asp Ala Gln Cys Val
35 40

<210> 20
<211> 42
<212> PRT
<213> Homo sapiens

<400> 20
Pro Cys Leu Asp Ser Val Thr Phe Ser Asp Val Val Ser Ala Thr Glu
1 5 10 15

Pro Cys Lys Pro Cys Thr Glu Cys Val Gly Leu Gln Ser Met Ser Ala
20 25 30

Pro Cys Val Glu Ala Asp Asp Ala Val Cys

35

40

<210> 21
<211> 42
<212> PRT
<213> Homo sapiens

<400> 21
Pro Cys Gly Pro Gly Phe Tyr Asn Asp Val Val Ser Ser Lys Pro Cys
1 5 10 15

Lys Pro Cys Thr Trp Cys Asn Leu Arg Ser Gly Ser Glu Arg Lys Gln
20 25 30

Leu Cys Thr Ala Thr Gln Asp Thr Val Cys
35 40

<210> 22
<211> 43
<212> PRT
<213> Homo sapiens

<400> 22
Pro Cys Gly Glu Ser Glu Phe Leu Asp Thr Trp Asn Arg Glu Thr His
1 5 10 15

Cys His Gln His Lys Tyr Cys Asp Pro Asn Leu Gly Leu Arg Val Gln
20 25 30

Gln Lys Gly Thr Ser Glu Thr Asp Thr Ile Cys
35 40

<210> 23
<211> 41
<212> PRT
<213> Homo sapiens

<400> 23
Thr Cys Arg Leu His Arg Phe Lys Glu Asp Trp Gly Phe Gln Lys Cys
1 5 10 15

Lys Pro Cys Leu Asp Cys Ala Val Val Asn Arg Phe Gln Lys Ala Asn
20 25 30

Cys Ser Ala Thr Ser Asp Ala Ile Cys
35 40

<210> 24
<211> 7
<212> PRT
<213> Homo sapiens

<400> 24

Asp Lys Thr His Thr Cys Pro
1 5

*A¹
cyclic*